ProCenter 12:00 Delivery System & Assistant's Unit User's Guide

CE 0088

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Model / Serial Number Locations

(Figure 1)

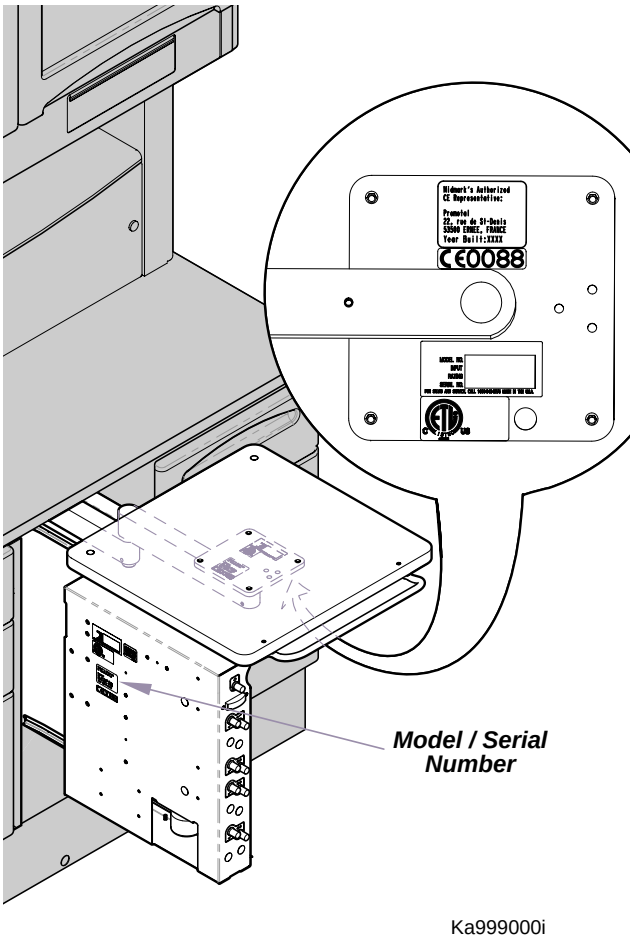

Figure 1. Model / Serial Number Locations

ATTENTION! Record model / serial number

Model : _____

Serial #: _____

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Part Number: 003-1257-00 Rev. D (1/03)

Intended Use

This delivery system is intended to provide dental professionals with air & water to operate dental handpieces, syringes, and Midmark authorized accessories during dental examinations and procedures.

CAUTION
The maximum weight the work surface will support is **40 lbs. (18 kg)**. Exceeding the weight limit may result in personal injury and/or damage to equipment.

Features

Midmark ProCenter Delivery Systems . . .

- use patented kink valve technology.
- allow the user to control air & water volume for up to six handpiece/syringe stations independently.
- have a pressure gauge to monitor and adjust handpiece turbine pressure.
- allow the user to shut off water and air to the unit ***at the source.***
- have a self contained water system for bacteria control.
- are designed with durable materials and finishes to withstand most chemicals commonly used in the dental office.

Midmark Assistant's Units . . .

- have a self contained water system for bacteria control.
- come equipped with one syringe, one saliva ejector and one or two high volume ejector(s).
- have a solids collector that is easily accessible for cleaning and/or retrieval of fittings.

Operation

Master ON / OFF Switch *(Figure 2)*

The delivery system & assistant's instruments are powered by air pressure, water pressure and low voltage electrical power for accessories.

To power up system, move **MASTER SWITCH** to ***ON*** position (I).

To power down system, move **MASTER SWITCH** to ***Standby / Off*** position **(O)**.

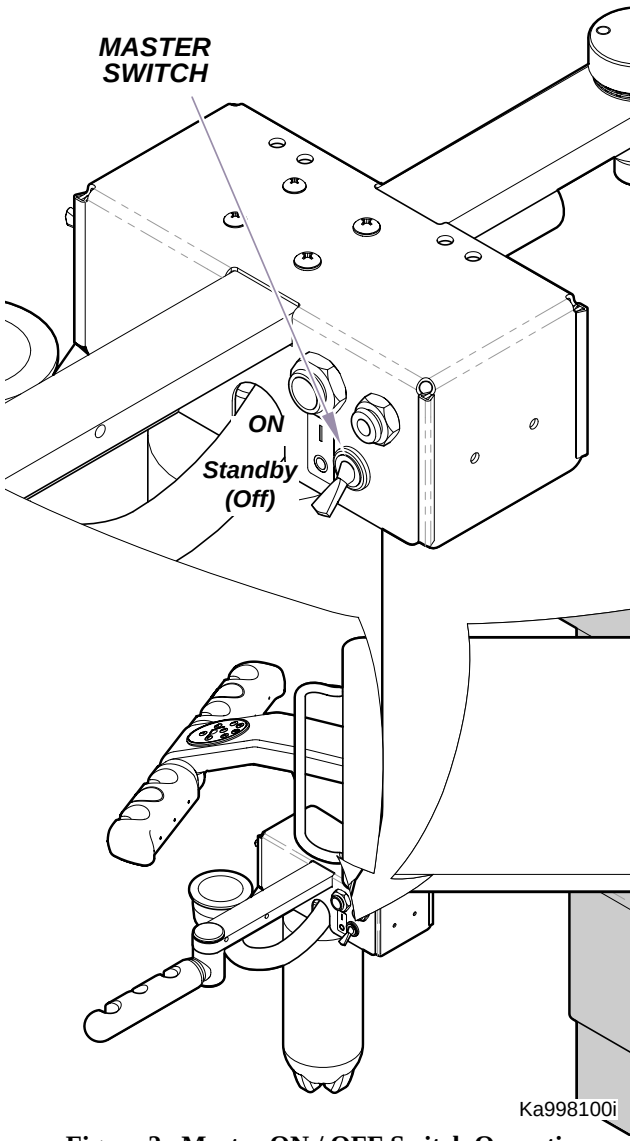


Figure 2. Master ON / OFF Switch Operation

Water Selector Switch Operation

(Figure 3)

The **WATER SELECTOR switch** allows the operator to use distilled water (from the self contained water system bottle) or "city" water throughout the system.

The switch is located on the water bottle mounting plate, directly under the work surface.

Operation:

Move **WATER SELECTOR switch** to desired position **(***See* **CITY WATER / BOTTLE LABEL** *on mounting plate*).

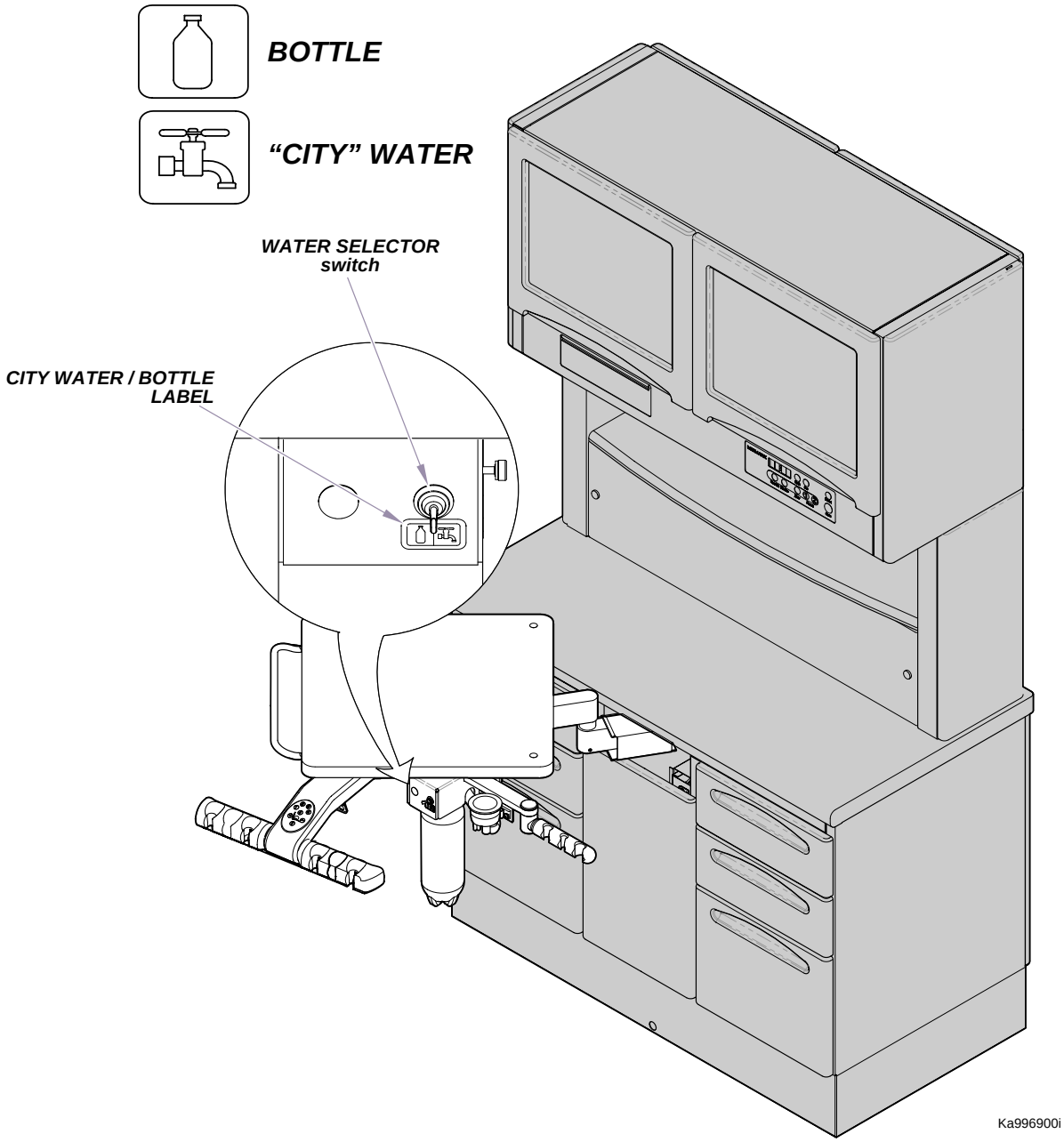


Figure 3. Water Selector Switch Location / Operation

Handpiece Operation (FIgure 4)

(ProCenter Delivery Systems only)

To operate a handpiece:

1) Move master switch to *ON* position. (Refer to ***Delivery System Power*** section).

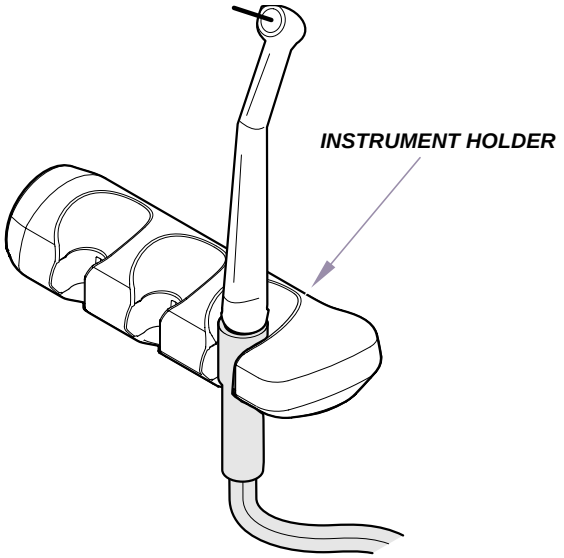
2) Move water selector switch to *Bottle* position. (Refer to ***Water Selector Switch Operation*** section)

3) Remove handpiece from **INSTRUMENT HOLDER**.

4) Flip the **WET / DRY TOGGLE switch** on foot control to desired position.

5) Depress **FOOT CONTROL PEDAL** to deliver drive air to selected handpiece.

6) Refer to ***Handpiece Adjustments*** section if air and/or water pressure adjustments are necessary.



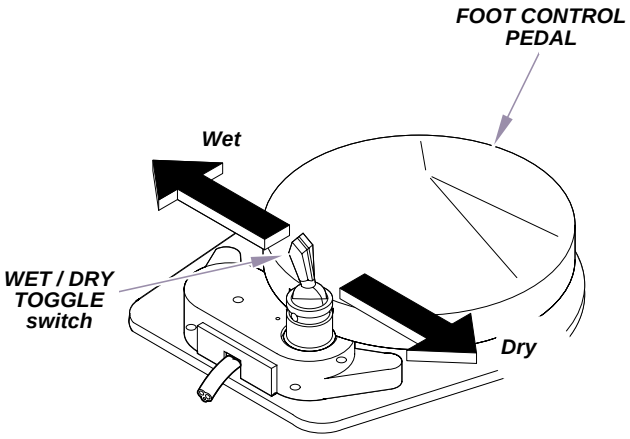


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Figure 4. Handpiece Operation

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Handpiece Adjustments (FIgure 5)

(ProCenter Delivery Systems only)

Perform the following adjustments as necessary to optimize handpiece performance.

To access adjustment knobs, open center cabinet door below work surface.

NOTE
There is a drive air adjustment knob and a coolant water adjustment knob for **each** handpiece station. The coolant air volume adjustment knob adjusts coolant air for **all** handpiece stations.

- ***Adjust drive air pressure*** by rotating the **DRIVE AIR ADJUSTMENT knob** until desired air pressure is displayed on pressure gauge (Refer to the handpiece manufacturer's specifications for recommended setting).
- ***Adjust coolant water volume*** by rotating **COOLANT WATER ADJUSTMENT knob** until desired flow of coolant water is achieved.

NOTE
The coolant air adjustment controls the spray pattern of air and water at handpiece. If handpiece you are using has an internal coolant air connection, this adjustment will have no effect and can be completely shut off.

- ***Adjust coolant air volume*** by rotating **COOLANT AIR ADJUSTMENT knob** until desired spray pattern is achieved.

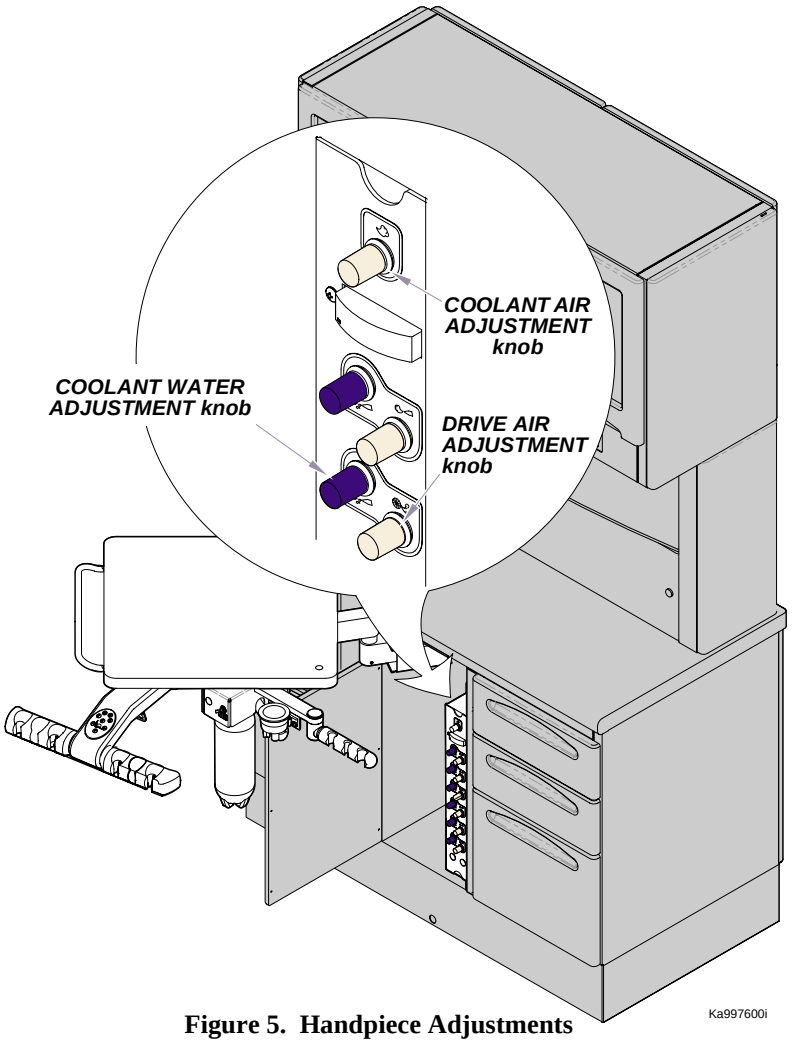

Figure 5. Handpiece Adjustments

Syringe Operation (Figure 6)

To operate standard 3-way air-water syringe:

1) Move master switch to *ON* position (Refer to ***Delivery System Power*** section).

2) Move water selector switch to *Bottle* position. (Refer to ***Water Selector Switch Operation*** section)

3) Press **WATER button** for water stream.
Press **AIR button** for air spray.
Press **AIR** & **Water buttons** for fine mist.

4) Refer to ***Syringe Adjustments*** section if air and/or water pressure adjustments are necessary.

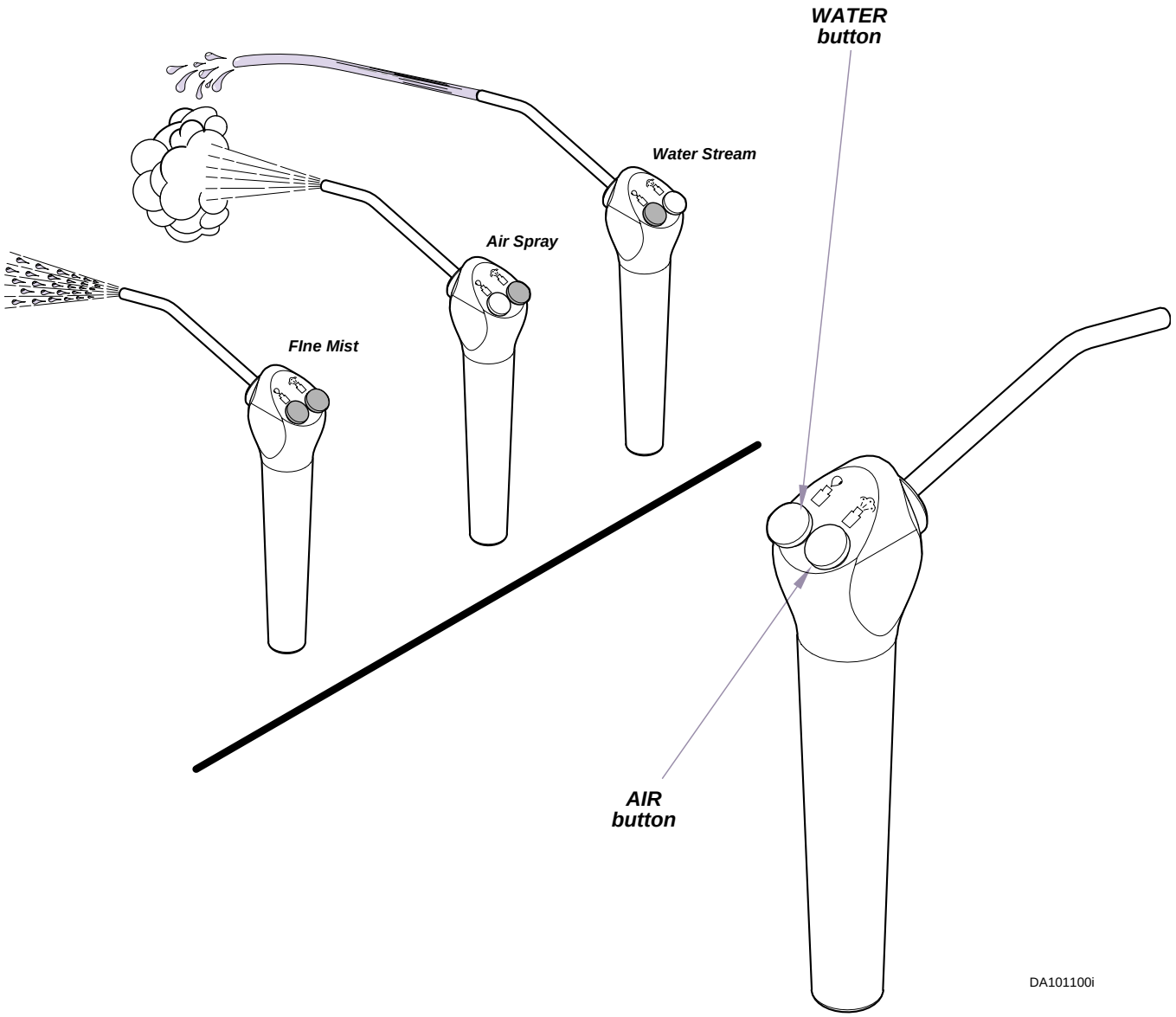

Figure 6. Syringe Operation

Syringe Adjustments (FIgure 7)

Perform the following adjustments as necessary to optimize syringe performance.

To access delivery unit syringe knobs, open center cabinet door below work surface.

Assistant's unit syringe knobs are located on the water bottle mounting plate under work surface.

NOTE
Both of following adjustments affect spray pattern of syringe water. Adjustment of both air and water volume may be necessary to achieve desired water spray pattern.

- ***Adjust syringe air volume*** by rotating **SYRINGE AIR ADJUSTMENT knob** until desired volume of air ***and*** water spray pattern is achieved.
- ***Adjust syringe water volume*** by rotating **SYRINGE WATER ADJUSTMENT knob** until desired volume of water ***and*** water spray pattern is achieved.

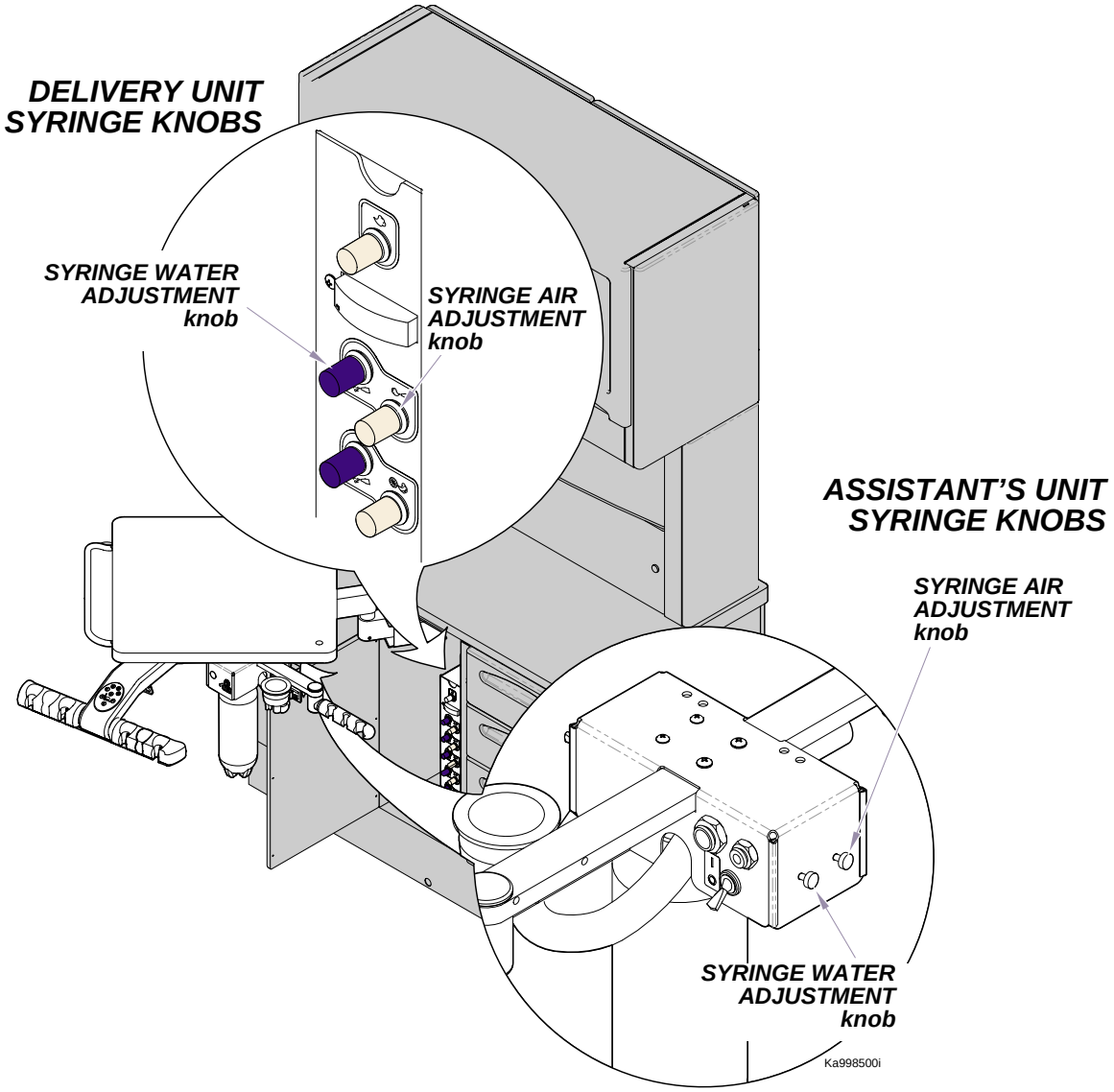

Figure 7. Syringe Adjustments

Saliva / High Volume Ejector Operation (Figure 9) (Asst's. Instrument Units only)

NOTE
Before operating either of the ejectors, the central vacuum source (which supplies the facility) must be turned on.

To activate suction:

Rotate **VACUUM LEVER** to ***Open*** position.

To stop suction:

Rotate **VACUUM LEVER** to ***Closed*** position.

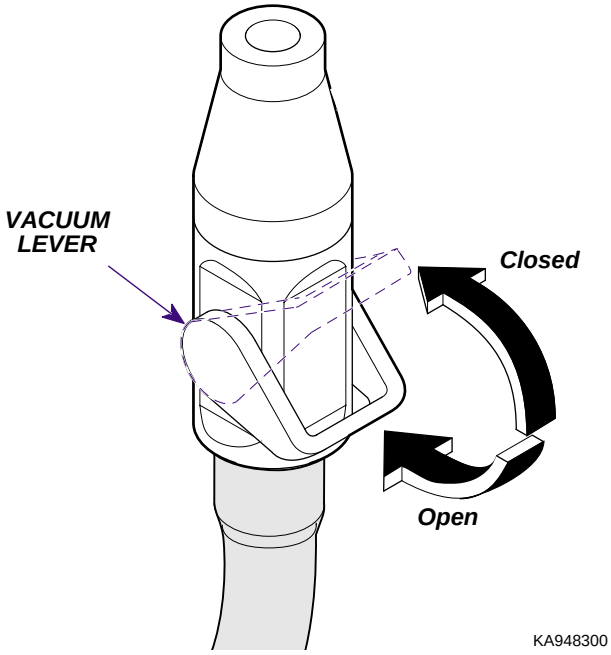

Figure 9. Saliva / High Volume Ejector Operation
(Saliva Ejector shown)

Quick-Connect Port Operation (Figure 10)

To connect an accessory to quick-connect port:

Insert **QUICK-CONNECT FITTING** into proper **QUICK -CONNECT PORT** (***Air*** / ***Water***).

NOTE
There are no water / air volume adjustments for the quick-connect ports.

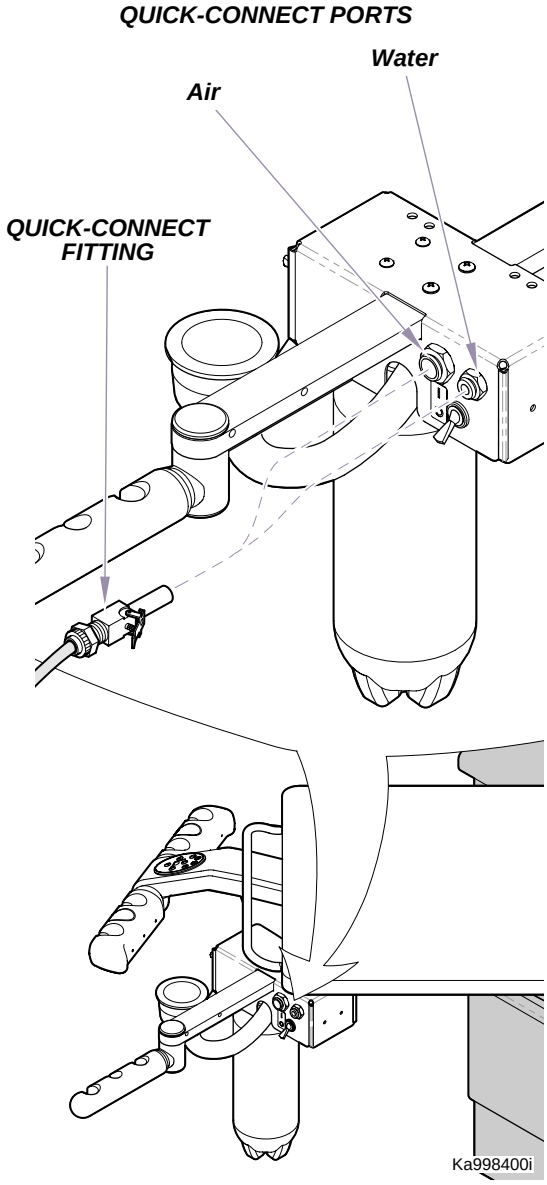

Figure 10. Quick-Connect Port Operation

Refilling Self-Contained Water System Bottle (Figure 11)

CAUTION
Move master switch to standby position before removing water bottle. In addition, press the AIR button of the syringe until all residual air pressure is released. This ensures air pressure has been released from water bottle. Failure to do so could result in eye injury due to airborne debris propelled by escaping air pressure.

1) Move master switch to *Standby* position (Refer to ***Delivery System Power*** section).

2) Unscrew **WATER BOTTLE** from **MOUNTING CAP**.
(Covers / console not shown for clarity)

3) Fill water bottle to neck with distilled water.

4) Ensure **GASKET** is in place in mounting cap; then screw water bottle into mounting cap.

5) Move master switch to *ON* position.

EQUIPMENT ALERT
Make sure water bottle is sealed properly against gasket in mounting cap and is not allowing any air pressure to escape. Failure to do so will result in low water pressure for syringes and handpieces.

6) Listen for escaping air pressure (hissing sound). If hissing sounds are heard, repeat steps 1 through 5 making sure gasket is in place and seated properly.

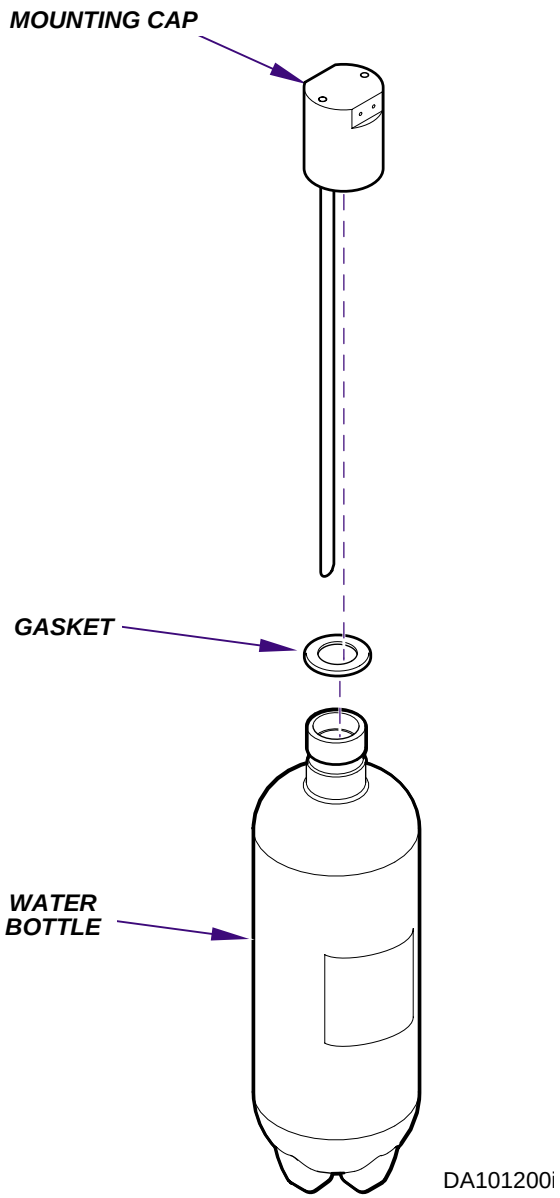

Figure 11. Refilling Self-Contained Water System Bottle

Operator Maintenance

Air / Oil Separator Cleaning (Figure 12)

(ProCenter Delivery Systems only)

Periodically check fluid level in oil bottle of air / oil separator system. When oil bottle is 2/3 full, perform following cleaning procedure:

1) Move master switch to ***Standby*** position (Refer to ***Delivery System Power*** section).

2) Open center door below work surface to access **CONTROL PANEL**.

3) Unscrew **OIL BOTTLE**.

4) Dispose of fluid and saturated **GAUZE SPONGE** in accordance with office procedures.

5) Disinfect oil bottle and mounting cap with a water based phenolic disinfectant.

6) Place a new gauze sponge in oil bottle; then screw oil bottle onto mounting cap (To obtain a new gauze sponge, refer to ***Replacement Parts*** section).

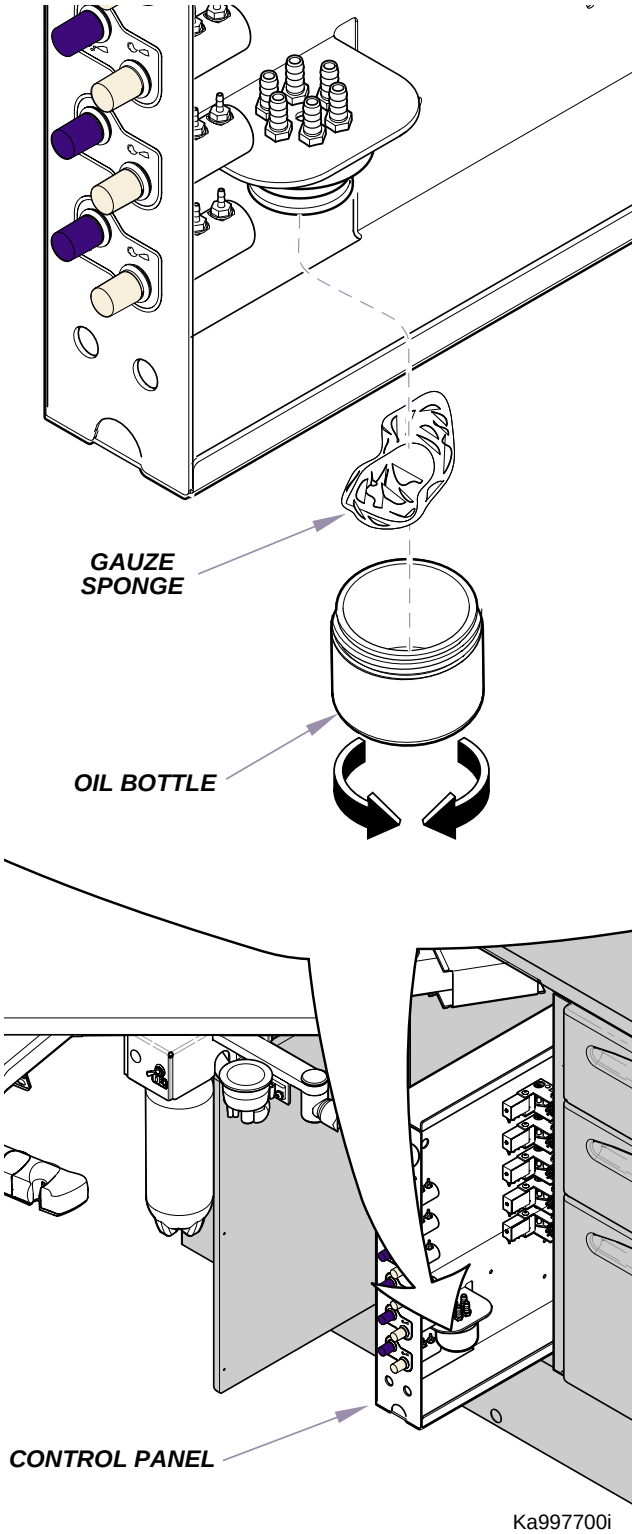

Figure 12. Air / Oil Separator Cleaning

Solids Collector Cleaning (Figure 13)

(Asst's. Instrument Units only)

1) Remove **SOLIDS COLLECTOR LID**.

NOTE
If collector basket is difficult to remove, wet inside of collector housing with syringe water. The water will soften amalgam for easier removal.

2) Remove **COLLECTOR BASKET**.

3) Empty collector basket and then scrub it with a brush until all debris is removed. If necessary, also scrub out inside surfaces of collector housing.

4) When clean, re-install collector basket in collector housing and then reinstall lid.

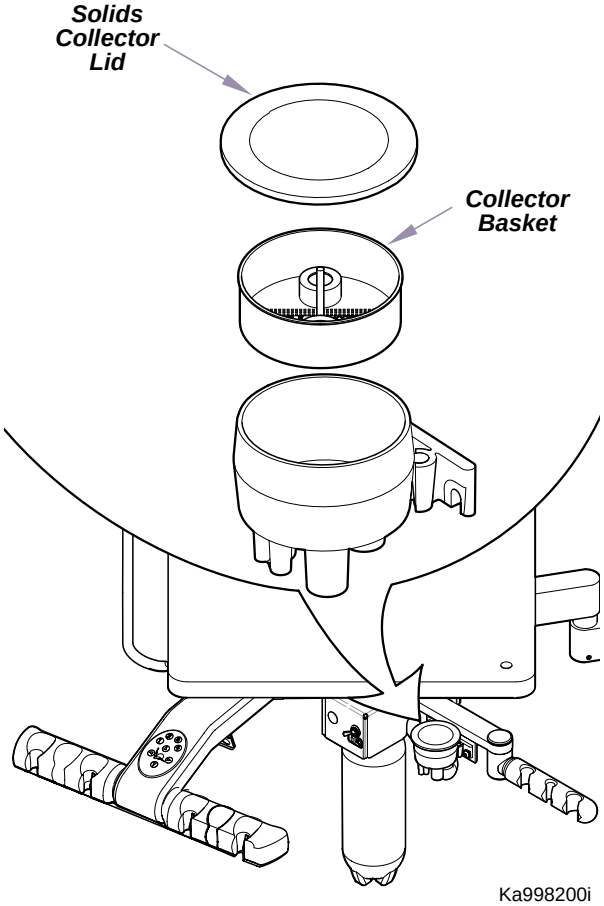

Figure 13. Solids Collector Cleaning

External Infection Control / Cleaning

EQUIPMENT ALERT
Do not use phenolics, Glutaraldehyde, or Iodophor to clean the unit. These chemicals will eventually damage the plastic and painted components of the unit. Also, do not use "strong" or "full strength" solutions (must be less than 1%) of alcohol or bleach to clean the unit; these solutions will discolor plastic components over time.

Touch Surfaces (controls and handles) - Use barrier protection between patients. At end of clinical-day, wipe touch surfaces with a mild soap and water solution on a lint-free cloth; then disinfect using a Quaternary disinfectant.

General Plastic Surfaces - Wipe periodically using a mild soap and water solution on a lint-free cloth. Wring excess solution from lint-free cloth before wiping. Disinfect as necessary using a Quaternary disinfectant.

General Painted Surfaces - Wipe periodically with a mild soap and water solution on a lint-free cloth. Wring excess solution from lint-free cloth before wiping. Disinfect as necessary using a Quaternary disinfectant.

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ProCenter Delivery System Cleaning / Disinfecting Procdures

NOTE
Midmark assumes no responsibility or liability for any result, expressed or implied. This publication is an attempt to convey to the user a suggested procedure based on best information available at the time.

Beginning Of Workday

1) Install a clean water bottle filled with distilled water (Refer to ***Refilling Self-Contained Water System Bottle*** section).

2) Perform purging procedure (Refer to ***Purging Handpiece and Syringe Tubing*** section).

3) Install sterile handpieces.

4) Set up for next patient in accordance to office procedures.

Between Patients

1) Move master switch to ***Standby*** position (Refer to ***Delivery System Power*** section).

2) Remove handpieces and disposable tips, barriers, etc., in accordance with office procedures.

3) Perform surface cleaning and disinfection in accordance to office procedures (Refer to ***External Infection Control / Cleaning*** section).

4) Perform purging procedure (Refer to ***Purging Handpiece and Syringe Tubing*** section).

5) Install sterile handpieces.

6) Set up for next patient in accordance to office procedures.

End of Day

1) Move master switch to ***Standby*** position (Refer to ***Delivery System Power*** section).

2) Remove handpieces and disposable tips, barriers, etc., in accordance to office procedures.

EQUIPMENT ALERT
Mix fresh solution daily and do not use bleach with additives or bleach that is colored or scented. Also, do not use concentrations of bleach greater than recommended in following step. Failure to do so could result in permanent damage to unit.

3) Mix diluted bleach solution as follows: use 1 part household bleach (5.25%) and 9 parts water. ***See Figure 14***.

4) Install a clean water bottle filled with diluted bleach solution (Refer to ***Refilling Self-Contained Water System Bottle*** section).

5) Perform purging procedure (Refer to ***Purging Handpiece and Syringe Tubing*** section).

6) Let solution stand in the delivery unit system for 5 minutes.

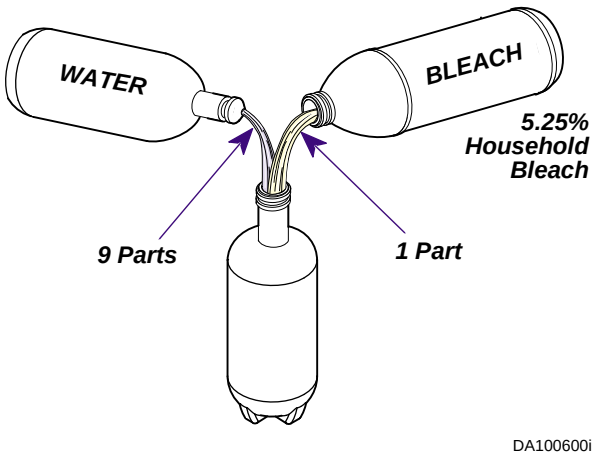

Figure 14. Diluted Bleach Solution

7) Move master switch to *Standby* position

8) Remove water bottle containing solution. Install clean, ***empty*** water bottle.

9) Perform purging procedure a second time with empty bottle until all solution is expelled from delivery system tubing

10) Move master switch to *Standby* position.

11) Depress foot control pedal until all pressure is relieved from delivery system.

12) Perform surface cleaning and disinfection according to office procedures.

End of Week / Storing

1) Move master switch to *Standby* position (Refer to ***Delivery System Power*** section).

EQUIPMENT ALERT
Mix fresh solution daily and do not use bleach with additives or bleach that is colored or scented. Also, do not use concentrations of bleach greater than recommended in following step. Failure to do so could result in permanent damage to unit.

2) Mix diluted bleach solution as follows: use 1 part household bleach (5.25%) and 9 parts water. ***See Figure 14***.

3) Remove water bottle and empty remaining water from bottle. Rinse water bottle with diluted bleach solution.

4) Clean mounting cap and tubing using disposables saturated with diluted bleach solution.

5) Fill water bottle with diluted bleach solution and install water bottle (Refer to ***Refilling Self-Contained Water System Bottle*** section).

6) Perform purging procedure (Refer to ***Purging Handpiece and Syringe Tubing*** section).

EQUIPMENT ALERT
Do not let solution stand in system for less than 10 minutes or longer than 30 minutes. Leaving in less than 10 minutes reduces effectiveness of procedure while leaving in longer than 30 minutes can result in damage to delivery system tubing.

7) Let solution stand in the delivery unit system for approximately 15 minutes.

8) Move master switch to *Standby* position.

9) Remove water bottle and empty remaining diluted bleach solution from bottle. Reinstall ***empty*** water bottle.

10) Perform purging procedure a second time without liquid until all bleach solution is expelled from delivery system tubing. (Refer to ***Purging Handpiece and Syringe Tubing*** section).

11) Move master switch to *Standby* position.

12) Remove water bottle and fill with distilled water. Install water bottle.

13) Perform purging procedure a third time until no bleach odor is evident in discharged water. (Refer to ***Purging Handpiece and Syringe Tubing*** section).

14) If storing delivery head for extended period of time, repeat step 10 of this procedure now to remove all water from delivery system tubing.

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Purging Handpiece and Syringe Tubing

(FIgure 15)

WARNING
It is recommended that this procedure be performed after each patient and at end of clinical day. Failure to purge handpiece and syringe tubing as recommended could result in shortened handpiece and/or syringe life, biofilm buildup, and unacceptable water quality levels inside delivery system tubing.

The following procedure removes all debris and matter that has worked its way into handpiece or syringe tubing. If this procedure is done on a frequent schedule, it will result in prolonged handpiece and syringe life, it will prevent biofilm buildup on handpieces and syringes, and will maintain acceptable water quality levels inside delivery system tubing. ***Midmark recommends that this procedure be performed after each patient and at end of clinical day.***

Purging Procedure:

1) Move master switch to *Standby* position (Refer to ***Delivery System Power*** section).

2) Move water selector switch to *Bottle* position. (Refer to ***Water Selector Switch Operation*** section).

3) Switch **WET / DRY TOGGLE switch** on foot control to **Wet** position.

4) If necessary, ***refill water bottle*** with water (Refer to ***Refilling Self-Contained Water System Bottle*** section).

5) Remove handpiece from instrument holder.

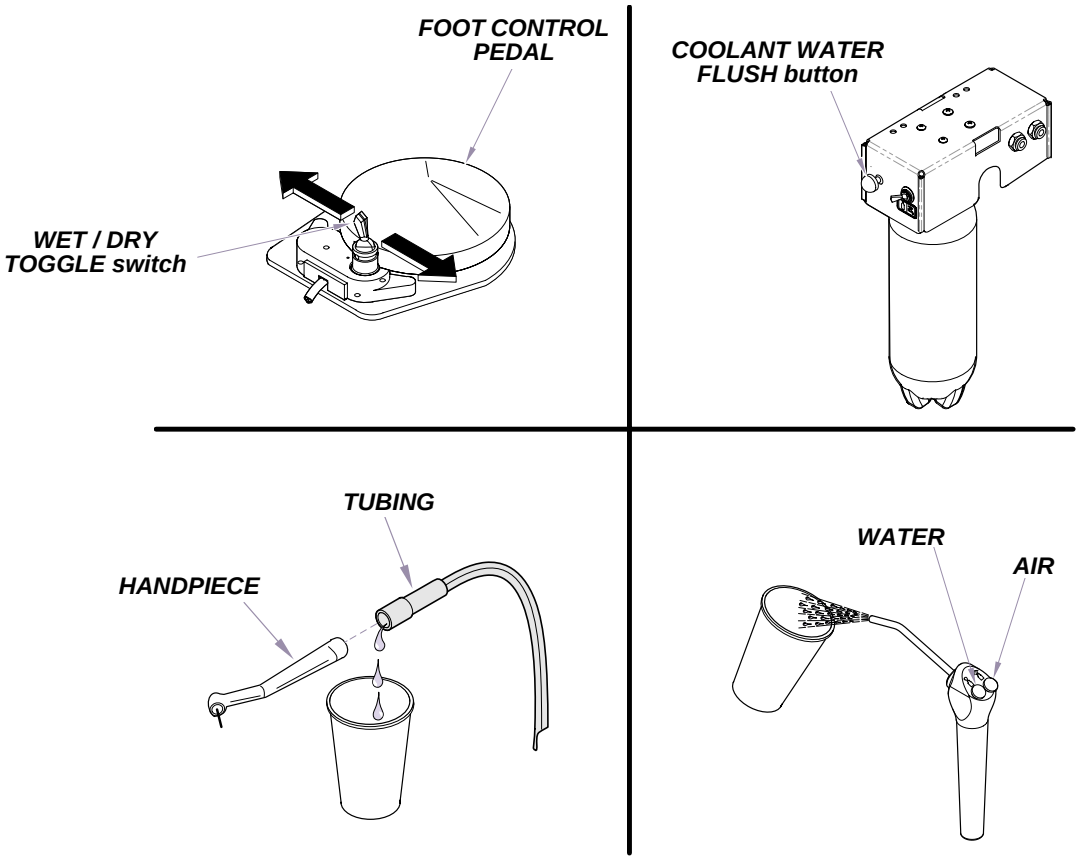


Figure 15. Purging Handpiece & Syringe Tubing

6) Disconnect **HANDPIECE** from **TUBING**.

ATTENTION!
Water will flow from tubing / syringe in the following steps. Hold tubing / syringe over a container or drain while performing steps 7 thru 10.

7) Depress **FOOT CONTROL PEDAL** for 30 seconds to flush coolant water and drive air lines.

8) Depress **COOLANT WATER FLUSH button** for 30 seconds. (*See **Figure 12** for location of button)*. Allow the water to run in a continuous stream without interruption for 30 seconds; run longer if necessary.

9) Repeat steps 5 through 7 for all remaining handpiece stations.

10) Depress **AIR** and **WATER** buttons on syringe(s) for 30 seconds.

Assistant's Instrument Unit Cleaning / Disinfecting Procedure

EQUIPMENT ALERT
Follow all cleaning instructions specified by vacuum system manufacturer. In addition, use only cleansers formulated for dental vacuum systems. Failure to comply could result in damage to system or diminished suction at ejector(s).

To maintain the vacuum system, refer to the vacuum system manufacturer's user's guide for directions.

Specifications

Pressure Adjustment ..... 0 - 80 psi (5.6 k/c^2) (for individual handpieces)
Classifications ..... Class 1, Type B Applied Part, Ordinary Equipment, Intermittent Operation
Certifications ..... UL-2601, CAN/CSA-C22.2 No. 601.1

Authorized Accessories

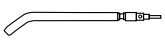
Accessory / Option Name	Order Number
12:00 FSC Unit Hdpc Illumination System *(115 VAC)*	153630-004
12:00 FSC Unit Hdpc Illumination System *(230 VAC)*	153630-005
12:00 FSC Unit Scaler	153631-002
12:00 FSC Unit Electric Handpiece	153632-002
12:00 FSC Unit Curing Light	153672-002

Replacement Parts

The following parts can be purchased from your dealer:

Gauze Sponge (For Air/Oil Separator)
Part Number: 121547

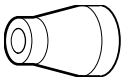
Syringe
Replacement Syringe Tip
Part Number: 120514



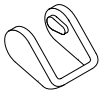
Replacement Collector Basket
Part Number: 151894

Saliva Ejector
Replacement Vacuum Lever
Part Number: 121045

Saliva Ejector
Replacement Ejector Tip
Part Number: 121317



High Volume Ejector
Replacement Vacuum Lever
Part Number: 121046



Syringe
Replacement Syringe Tip
Part Number: 120514

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MIDMARK®

General Information

Electromagnetic Interference

Midmark dental operatory components are designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this operatory, remove interfering device from room or plug product into an isolated circuit.

Symbols & Notes

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The DANGER symbol is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

Indicates an imminently or potentially hazardous situation which, if not avoided, will or may result in serious, moderate, or minor equipment damage.

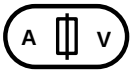
NOTE

Amplifies an operating procedure, practice, or condition.

Type B, Applied Part

Consult operator's manual for important information.

Dangerous voltage / shock hazard.

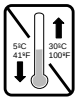


Fuse rating specification

Protective earth ground

Fragile

Proper shipping orientation



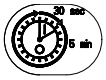
Minimum and maximum storage temperatures

Keep dry

Hot surface

ON

STANDBY



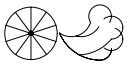
Duty cycle: (motor run time 30 sec. on, 5 min. off).

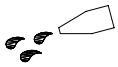
Cup Fill water flow adjustment.

Bowl Flush water flow adjustment

"City" water

Self-contained (distilled) water


Handpiece drive air adjustment

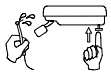

Handpiece/Syringe coolant water flow adjustment

Handpiece coolant air adjustment / Air Quick Disconnect

Water Quick Disconnect

Unlocked (Chair rotation)

Locked (Chair rotation)


Handpiece flush button
(***Note***: Remove handpiece from station; then remove handpiece from tubing connector).

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DECLARATION OF CONFORMITY

MIDMARK CORPORATION

Midmark Corporation declares that ProCenter Dental Units conform to the applicable requirements of the Medical Device Directive 93/42/EEC, Annex V and VII.

Serial Numbers: NV1000, PZ1000 and RC1000 to present.

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12:00 Delivery System

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